

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number
WO 2004/041996 A3

(51) International Patent Classification⁷: A61B 5/04

(21) International Application Number:
PCT/IL2003/000913

(22) International Filing Date:
3 November 2003 (03.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/423,973 6 November 2002 (06.11.2002) US

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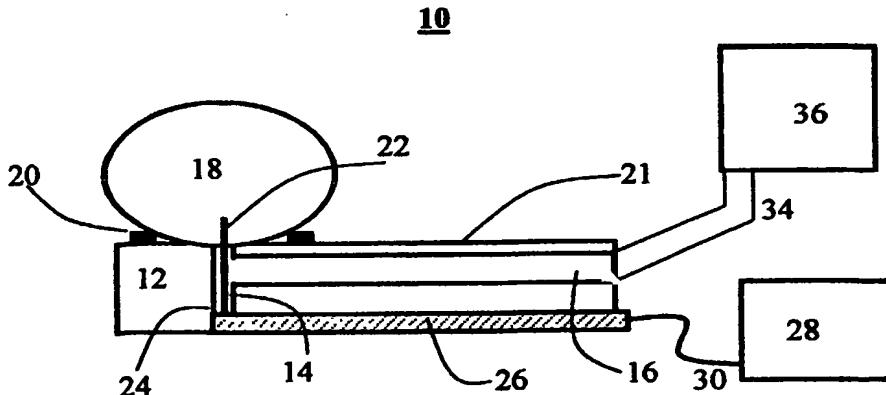
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(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: SYSTEM FOR AND METHOD OF POSITIONING CELLS AND DETERMINING CELLULAR ACTIVITY THEREOF



(side view)

WO 2004/041996 A3

(57) Abstract: A device for positioning at least one cell in at least one addressable position, the device comprising a substrate (12) formed with at least one addressable pore (14) and at least one channel (16) embedded in the substrate and being held in fluid communication with the at least one pore. The at least one pore and the at least one channel are designed and constructed such that an under-pressure formed in the at least one channel results in vacuum adherence of the at least one cell onto the at least one pore, such that a single cell is vacuum adhered onto a single pore. In one embodiment, the substrate is a non-conductive substrate and is further formed with one or more electrode structures (22), where each of the electrode structures is positioned in one of the pores. In an additional embodiment the device is designed to be locatable on an organ, such as the brain.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
28 October 2004

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00913

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 5/04
US CL : 600/373

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/373, 378; 607/116-118; 435/173.4, 287.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,461,304 A (KUPERSTEIN) 24 July 1984 (24.07.1984), See entire document.	1-368
A	US 4,969,468 A (BYERS et al) 13 November 1990 (13.11.1990), See entire document.	1-368
A, E	US 6,699,697 B2 (KLEMIC et al) 02 March 2004 (02.03.2004), See entire document.	1-368
A, E	US 2004/0006264 A (MOJARRADI et al) 08 January 2004 (08.01.2004), see entire document.	1-368

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See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

31 August 2004 (31.08.2004)

Date of mailing of the international search report

14 SEP 2004

Name and mailing address of the ISA/US

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